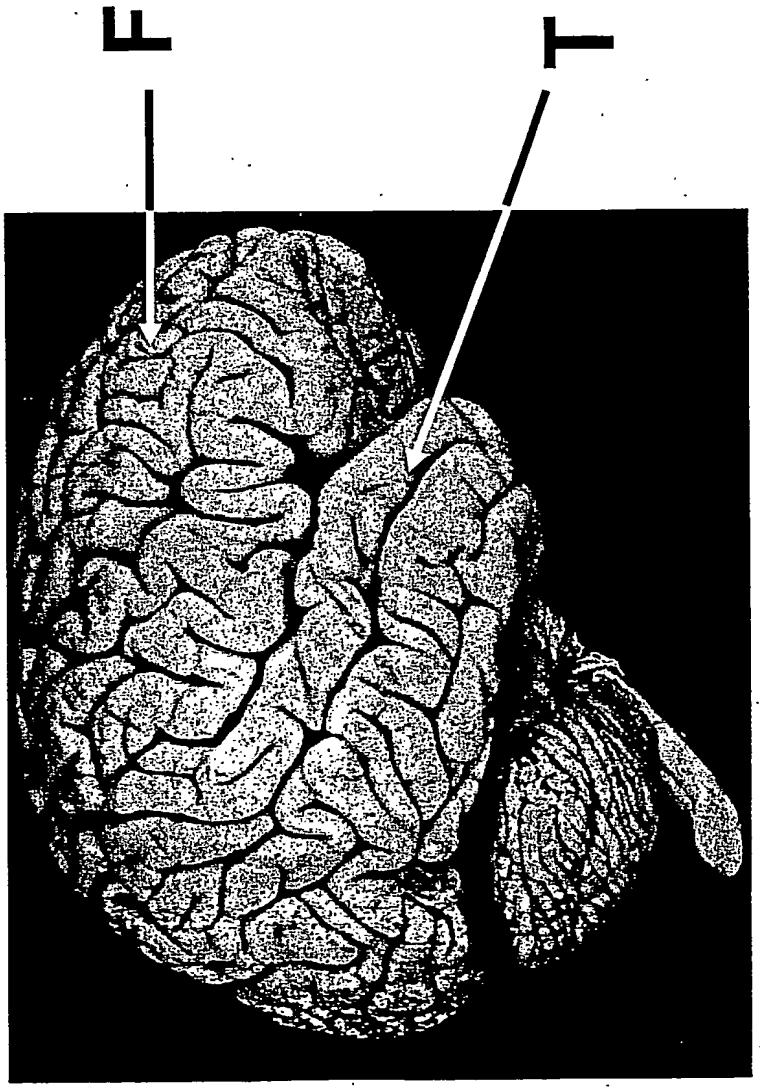
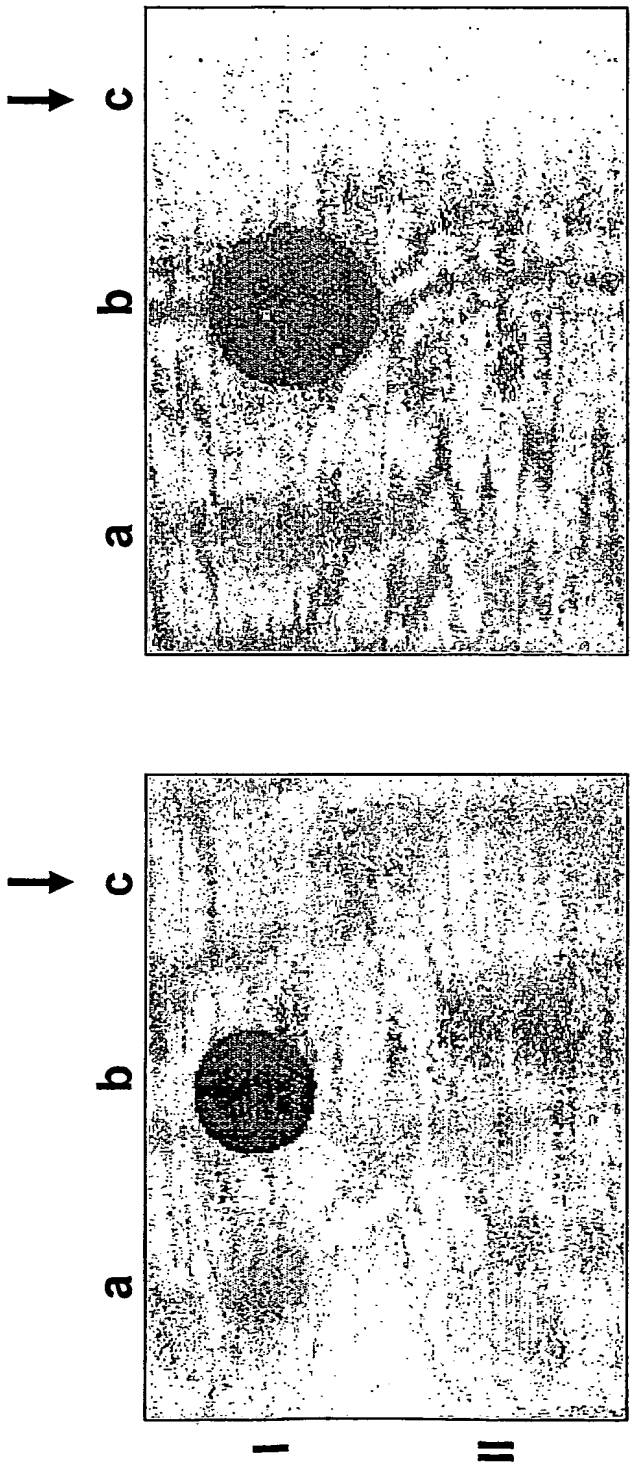


Fig. 1: Identification of Genes Involved in Alzheimer's Disease Pathology

Fig. 2: Identification of differentially expressed genes in a suppressive subtractive hybridization screen by dot blot analysis



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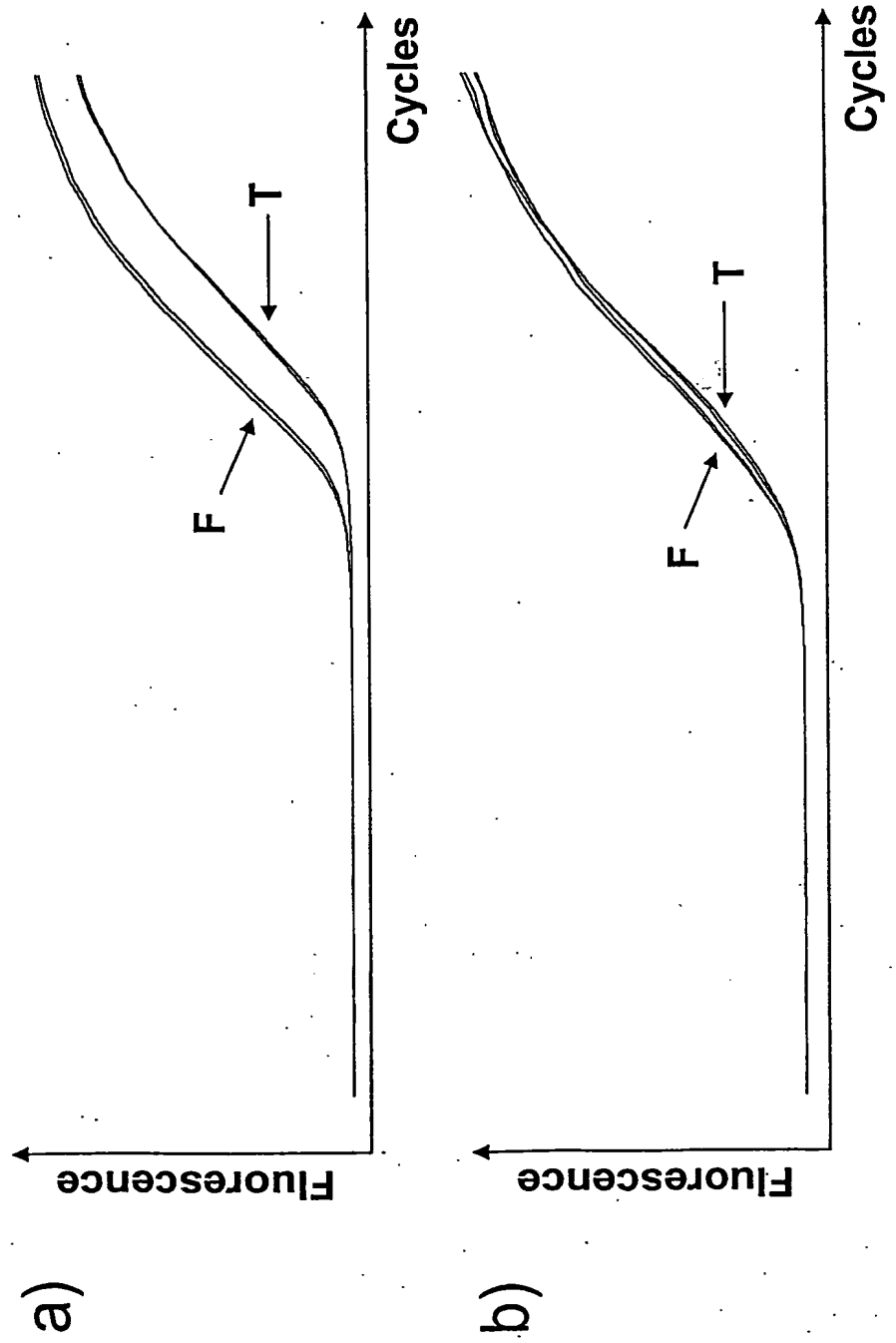

Fig. 3: Verification of differential expression of SCN2A by quantitative RT-PCR

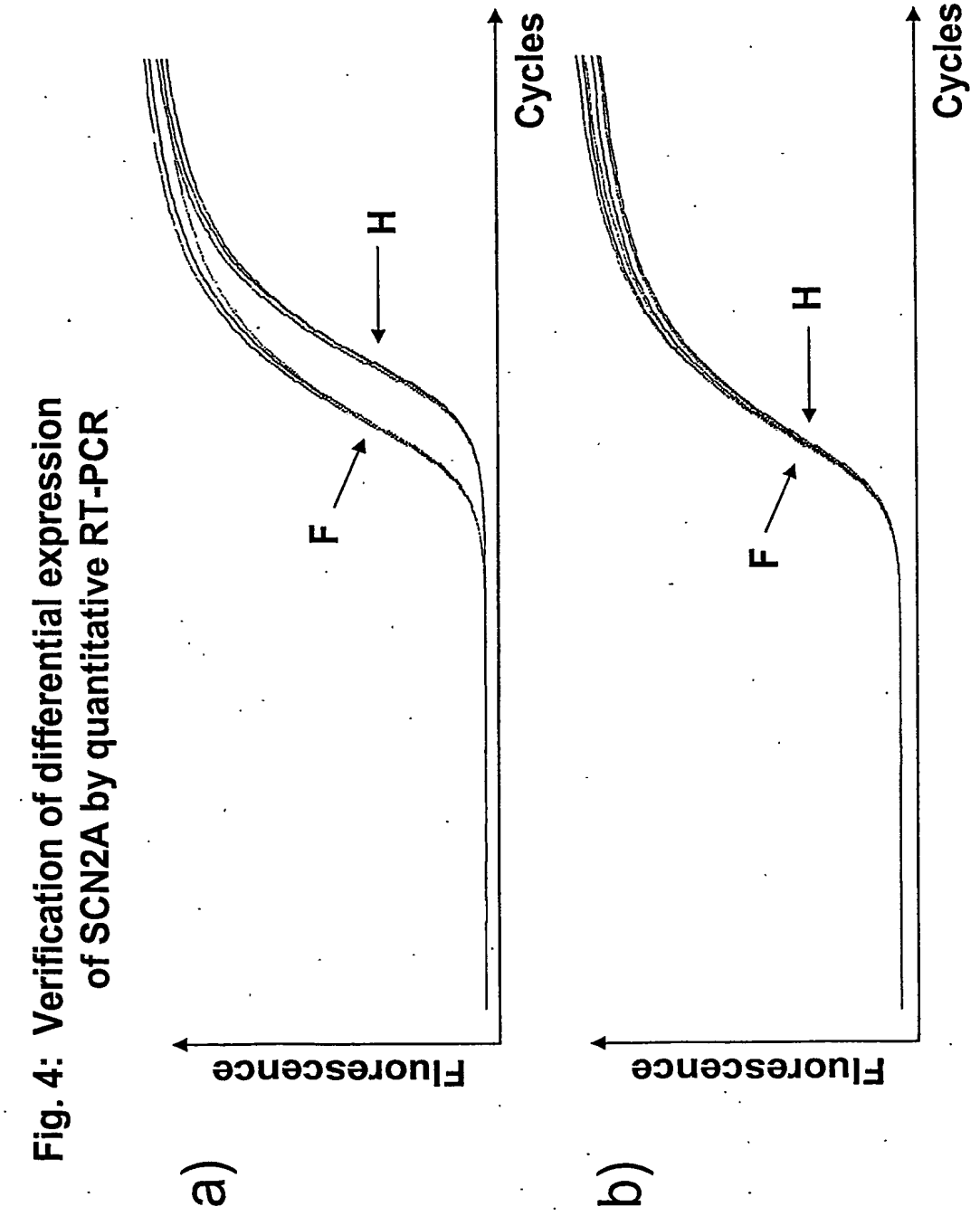

Fig. 4: Verification of differential expression of SCN2A by quantitative RT-PCR

Fig. 5: Nucleotide sequence of SEQ ID NO: 1

Length: 272 bp

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  1  AATTAAGGTT GGAAGAATAA AAAGCAAGAA GCTCTTCCTT GTTTGCTGCA
 51  ACCTATTGCT TAATGACATG AAGAATGAGG TCTTGGTAGA ACAATTTGCT
101  TCACTTTACC ACTGATATAT GGCTTCCCAT ATTAGACTTC TGAACAGGGG
151  AAGGAATAAG ATACAGCAGC ATAGGCAAGA TAAACATGCA GCAGTGACAG
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251  CAAACTATAC TTACTGGGGT AC
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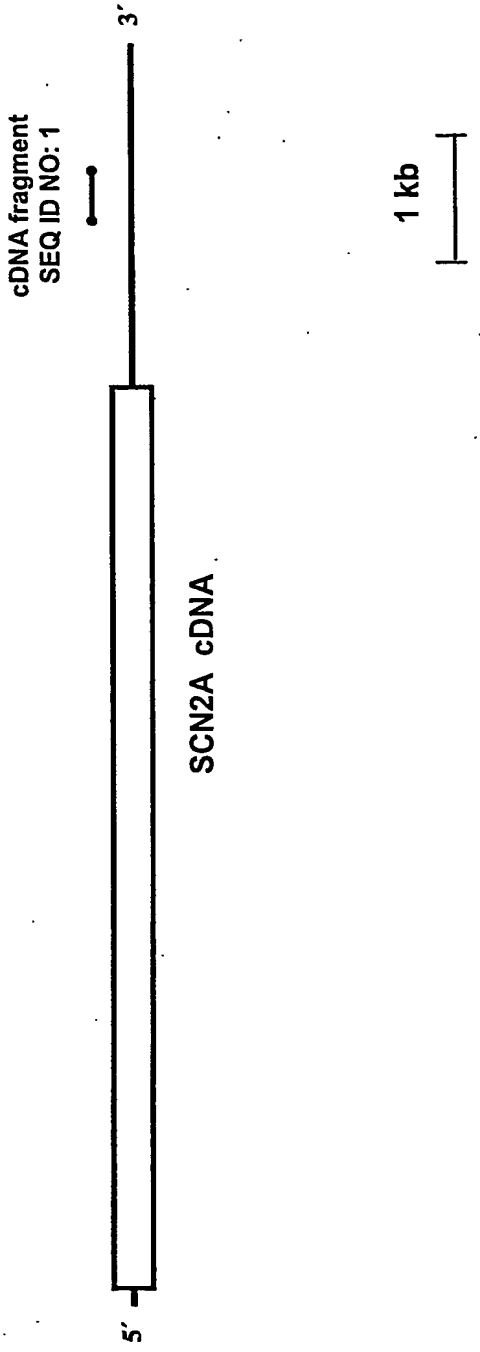

Fig. 6: Schematic alignment of SEQ ID NO: 1 with sodium channel type II alpha subunit (Accession No. AF327224 - AF327246)

Fig. 7: Alignment of SEQ ID NO: 1 to voltage-gated ion channel type II A cDNA, SEQ ID NO: 2

Length: 272 bp

```
 272 GTACCCCAGTAAGTATAGTTTGCAAGCTTCCAACAGGTAATATGATGTAA 223
     ||||| |||||||||||||||||||||| ||||||||||||||||||||
7248 GTACCACAGTAAGTATAGTTTGCAAGCTTTCAACAGGTAATATGATGTAA 7297

 222 TTGGTTCCATTATAGTTTGAAGCTGTCACTGCTGCATGTTTATCTTGCCT 173
     ||||||||||||||||||||||||||||||||||||||||||||||||||
7298 TTGGTTCCATTATAGTTTGAAGCTGTCACTGCTGCATGTTTATCTTGCCT 7347

 172 ATGCTGCTGTATCTTATTCCTTCCCCTGTTCAGAAGTCTAATATGGGAAG 123
     |||||||||||||||||||||||| ||||||||||||||||||||||||
7348 ATGCTGCTGTATCTTATTCCTTCCACTGTTCAGAAGTCTAATATGGGAAG 7397

 122 CCATATATCAGTGGTAAAGTGAAGCAAATTGTTCTACCAAGACCTCATTC 73
     |||||||||||||||||||||||||||||||||||||||||||||||||
7398 CCATATATCAGTGGTAAAGTGAAGCAAATTGTTCTACCAAGACCTCATTC 7447

  72 TTCATGTCATTAAGCAATAGGTTGCAGCAAACAAGGAAGAGCTTCTTGCT 23
     |||||||||||||||||||||||||||||||||||||||||||||||||
7448 TTCATGTCATTAAGCAATAGGTTGCAGCAAACAAGGAAGAGCTTCTTGCT 7497

  22 TTTTATTCTTCCAACCTTAATT 1
     |||||||||||||||||||||
7498 TTTTATTCTTCCAACCTTAATT 7519
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Fig. 8: SEQ ID NO. 2: nucleotide sequence of human SCN2A cDNA

Length: 8292 bp

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  51  GATGGCACAG TCAGTGCTGG TACCGCCAGG ACCTGACAGC TTCCGCTTCT
 101  TTACCAGGGA ATCCCTTGCT GCTATTGAAC AACGCATTGC AGAAGAGAAA
 151  GCTAAGAGAC CCAAACAGGA ACGCAAGGAT GAGGATGATG AAAATGGCCC
 201  AAAGCCAAAC AGTGACTTGG AAGCAGGAAA ATCTCTTCCA TTTATTTATG
 251  GAGACATTCC TCCAGAGATG GTGTCAGTGC CCCTGGAGGA TCTGGACCCC
 301  TACTATATCA ATAAGAAAAC GTTTATAGTA TTGAATAAAG GGAAAGCAAT
 351  CTCTCGATTC AGTGCCACCC CTGCCCTTTA CATTTTAACT CCCTTCAACC
 401  CTATTAGAAA ATTAGCTATT AAGATTTTGG TACATTCTTT ATTCAATATG
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 751  CTGAAGACCA TTGTGGGGGC CCTGATCCAG TCAGTGAAGA AGCTTTCTGA
 801  TGTCATGATC TTGACTGTGT TCTGTCTAAG CGTGTTTGCG CTAATAGGAT
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1001  ATGAATATAT TGAGGATAAA AGTCACTTTT ATTTTTTAGA GGGGCAAAAT
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1201  GACTTCTGGG AAAACCTTTA TCAACTGACA CTACGTGCTG CTGGGAAAAC
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2101  CGGTCCAGTT CTTATCATGT TTCCATGGAT TTATTGGAAG ATCCTACATC
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2201  AACTTGAAGA ATCCAGACAG AAATGCCCAC CATGCTGGTA TAAATTTGCT
2251  AATATGTGTT TGATTTGGGA CTGTTGTAAA CCATGGTTAA AGGTGAAACA
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8251  ACAATCAAGC CAAAAGAATA AAGGTTTCGC TTTTGTTTTT GT
```

Fig. 9: SEQ ID NO. 3: amino acid sequence of human SCN2A protein

Length: 2005 aa

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   1  MAQSVLVPPG PDSFRFFTRE SLAAIEQRIA EEKAKRPKQE RKDEDDENGP
  51  KPNSDLEAGK SLPFIYGDIP PEMVSVPLED LDPYYINKKT FIVLNKGKAI
 101  SRFSATPALY ILTPFNPIRK LAIKILVHSL FNMLIMCTIL TNCVFMTMSN
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 401  YMIFFVLVIF LGSFYLINLI LAVVAMAYEE QNQATLEEAE QKEAEFQQML
 451  EQLKKQQEEA QAAAAAAASAE SRDFSGAGGI GVFSESSSVA SKLSSKSEKE
 501  LKNRRKKKKQ KEQSGEEEKN DRVLKSESED SIRRKGFRFS LEGSRLTYEK
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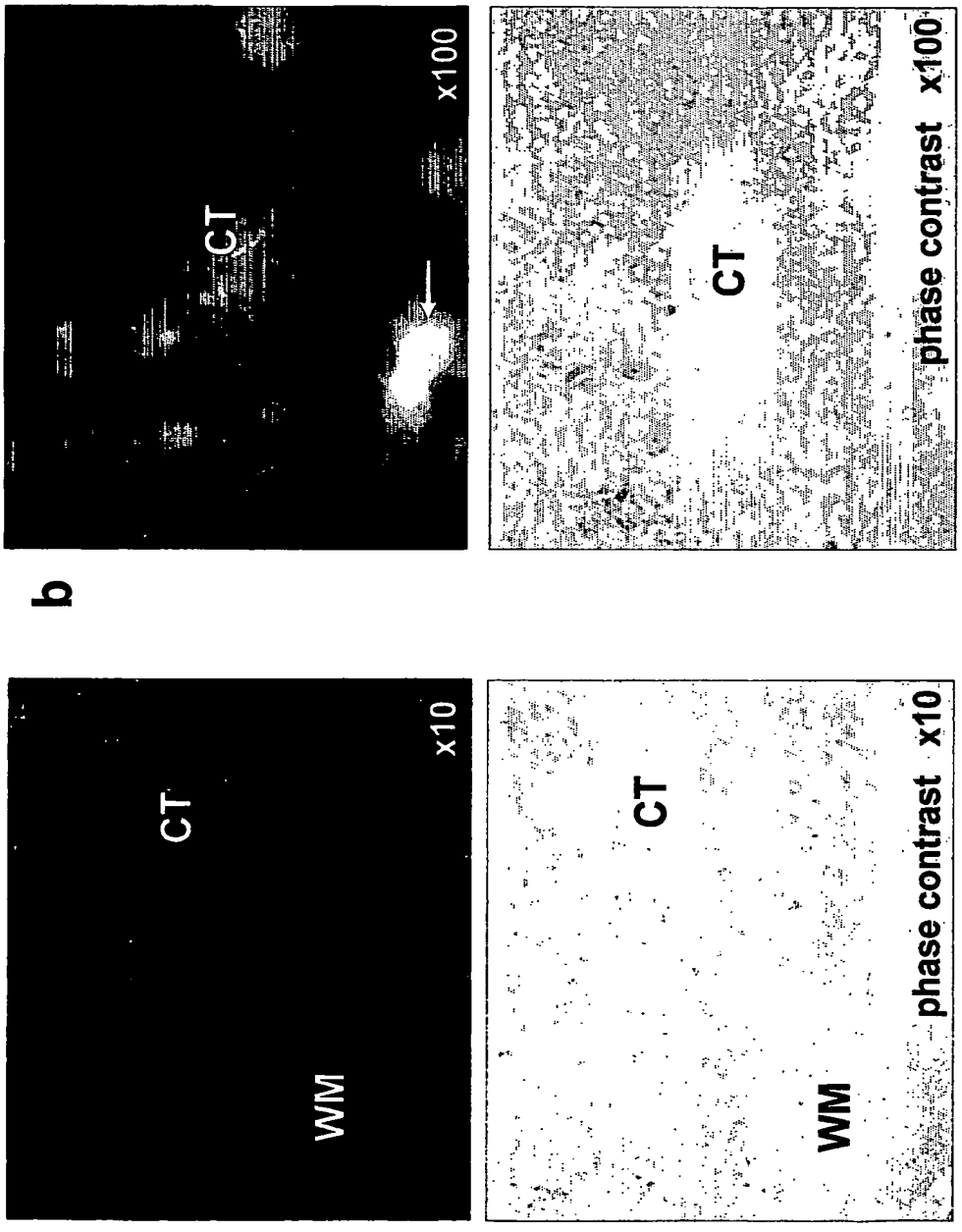

Fig. 10: Images of the human cerebral cortex labeled with anti SCN2A antibody and with DAPI